

Valency Classes in Mandarin

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1 Introduction

This chapter describes the main regularities in the valency properties of verbs in Mandarin, a member of the Sino-Tibetan family. Mandarin, also known as (Modern) Standard Chinese or *Pǔtōnghuà*, is the official language of the People's Republic of China and Chinese Taiwan, one of the four official languages of Singapore and one of six official languages of the United Nations. It is known as *Guóyǔ* or *Huáyǔ* in other parts of the world. It has the largest population of native speakers on earth.

According to an official definition, Mandarin is based phonologically on the Beijing dialect of Chinese, grammatically and lexically standardized to the body of modern Chinese literary works that define modern written vernacular Chinese, the colloquial alternative to Classical Chinese. The data discussed here represent the 'common Mandarin' accepted by all Mandarin speakers.

The Mandarin writing system as a whole is logographic, i.e., each single written character expresses a monosyllabic morpheme or word. In this chapter the Mandarin examples are presented in *Hànyǔ Pīnyīn*, the official standard romanized phonetic transcription system.

The chapter is organized as follows: Section 2 summarizes the most basic aspects of Mandarin morphosyntax. Section 3 gives a sample set of Mandarin verbs with their valency patterns. Section 4 mainly deals with the morphologically unmarked valency alternations. The last section is a brief summary.

In addition to the glossing symbols of Leipzig Glossing Rules (<http://www.eva.mpg.de/lingua/resources/glossing-rules.php>), a few more Mandarin-specific symbols are used in the chapter. The following is a list of such frequently used ones:

BA	an object marker: preposition <i>bǎ</i> , followed by a raised, specific pre-verbal object.
BEI	a passive marker <i>bèi</i> , preceding a degraded subject in passive constructions. Sometimes, the degraded subject can be omitted.
CRS	Currently Related State: sentence-final <i>le</i> .
DE	a modification marker, clitic <i>de</i> .
-DE	an applicative verbal suffix indexing a predicate complement <i>-de</i> .
DUR	Durative Aspect: verbal suffix <i>-zhe</i> .
EXP	Experiential Aspect: verbal suffix <i>-guo</i> .
PFV	Perfective Aspect: verbal suffix <i>-le</i> .

2 Basics of Mandarin morphosyntax

2.1. General characteristics of Mandarin

Mandarin is an isolating/concatenative language that uses word order, adpositions (overwhelmingly prepositions) and suffixation as its most important grammatical coding devices.

Though Mandarin is an SVO language, it obviously differs from most SVO languages in the following features, which resemble typical SOV languages:

1) With few exceptions (see section 2.2.2), all oblique nominal participants and adverbials precede the main verb.

2) Further, the word order at the NP level is completely head-final.

While Mandarin is basically a dependent-marking language, it uses verbal applicative suffixes to a considerable extent, indexing valency change of verbs. (2.2.4)

2.2 Basic clause structure

2.2.1 Information status and role frames of valency

Mandarin role frames of valency are highly sensitive to information structure. Most importantly, the pre-verbal nominals must be definite, specific or generic while post-verbal nominals are not restricted in (in)definiteness though they tend to be indefinite, especially when a nominal is allowed both positions by the valency alternations of the verb, illustrated below:

- (1) a. *tā mǎi-le yī-liàng chē*
he buy-PFV one-CL car
'He bought a car.'
- b. BA Alternation (4.6) is not allowed.
**tā bǎ yī-liàng chē mǎi-le*
he BA one-CL car buy-PFV
'He bought a car.'
- (2) a. *tā mài-le yī-liàng chē*
he sell-PFV one-CL car
'He sold a car.'
- b. BA Alternation (4.6) is allowed.
tā bǎ yī-liàng chē mài-le
he BA one-CL car sell-PFV
'He sold a car.'

Since the number of cars in the market is huge, 'a car' in market is much less specified than that of an owner, the object 'a car' cannot precede the verb in (1) but can do so in (2)¹.

Information structure not only directly affects role frame of valency, it also indirectly affects role coding. In Mandarin, pre-verbal participants that are not topic or subject normally take some prepositions as role markers, as illustrated above. And pre-verbal participants with prepositions are conventionally treated as obliques in Chinese syntax.

2.2.2 Post-verbal nominal obliques

The following figure shows the most striking features of Mandarin clausal word order when compared with the orders in all other VO languages.

VO languages			OV languages			No dominant order
VOX	XVO	VXO	XOV	OXV	OVX	
189	3	0	45	23	37	152

¹ The difference of the two sentences in (2) is that (2a) could be used simply to report on an event while (2b) would be more likely to be used in a discussion about what has happened to 'his cars'. In other words, the object 'a car' in (2b) is more prominent in the conversation context (Li & Thompson 1981:483-491).

Fig. 1 Order of object, oblique and verb (Dryer & Gensle 2005)

Among the world's 192 VO languages, only three languages dominantly put obliques (or nominal adjuncts) before V. These three languages are Mandarin and its two major dialectal variations: Hakka and Cantonese.² In fact, the same difference holds for adverbials. Adverbials in Mandarin precede the main verb, though they basically follow the main verb in all other SVO languages.

However, there are three kinds of obliques that do follow the verb. They are the expressions of event quantity (duration or occurrence), Goal/Recipient and Result, all being highly functionally-motivated to appear later.

1) Event quantity

- (3) *tā shànggèyuè bìng-le sān-tiān/ sān-cì*
 he last month ill-PFV three day/three time
 'He was ill for three days/three times last month.'
- (4) *tā qùnián bìng-le yī-gèyuè*
 he last year ill-PFV one month
 'He was ill for one month last year.'

In (3) and (4), since the time location 'last month' and 'last year' are definite terms while the event quantity expressions 'three days', 'three times' and 'one month' are indefinite, they occur pre-verbally and post-verbally respectively. The post-verbal position of event quantity is motivated by the definiteness effect³.

2) Recipient/Goal

- (5) *tā sòng-le yī-běn shū gěi tā*
 he send-PFV one-CL book to he
 'He sent a book to him.'
- (6) *tā fàng-le yī-běn shū dào zhuōzi shàng*
 he put-PFV one-CL book onto table LOC
 'He put a book on the table.'

3) Result

- (7) *wǒmen mìngmíng zhè-tiáo chuán wéi Shànghǎi-hào*
 we name this-CL ship as Shanghai-title
 'We name this ship as *Shanghai*.'

The oblique of result is only available to a closed set of verbs of naming, electing, titling etc.

The post-verbal position of Goal/Recipient and Result is motivated by the Principle of Temporal Sequence, since these expressions are natural endpoints of events (Tai 1985:50).

2.2.3 Three basic codings of non-subject nominal constituents

A nominal constituent, if not coded as subject, can mainly be coded in three other forms, i.e., oblique, applicative object or direct object, according to its pragmatic status, as shown below:

² Lu and Wu (2009) attribute this unique characteristic of Chinese syntax to its greater sensitivity to information status, and its clearer Ground-Figure segregation. Specifically, Mandarin puts those constituents that are neither topic nor focus in the sentence-middle position, thus extending the distance between topicalized and focused constituents.

³ Furthermore, when a verb is transitive and both the expressions of event quantity and object are post-verbal, the relative order between the two is also determined by definiteness effect. A definite and/or animate object precedes the expression of event quantity, while a generic/non-referential object follows it.

A contribution to the the cross-linguistic project "Valency Classes in the World's Languages", see for details <http://www.eva.mpg.de/lingua/valency/index.php>

(8) a. oblique:

tā zài zhè-tiáo lù(shàng) zǒu
 he in this-CL road (LOC) walk
 'He is walking on this road.'

b. applicative object:

*tā zǒu-zài zhè-tiáo lù *(shàng)*
 he walk-on this-CL road (LOC)
 'He is walking on this road.'

c. direct object:

*tā zǒu zhè-tiáo lù *(shàng)*
 he walk this-CL road (LOC)
 'He takes this road.'

(8a) is a pragmatically neutral statement. (8b) emphasizes the location as a focus or a piece of new information. (8c) raises the transitivity of the verb, emphasizing the subject's control and volition⁴.

That the location expression in (8c) should be taken as an object can be confirmed by the prohibition of the postpositional locative marker *shàng* (lit. on, on the top of).

The following contrast between (9) and (10) further highlights the difference in valency frame coding of pre-verbal nominals and post-verbal ones.

(9) a. *wǒ hěn xīwàng nǐ néng lái*
 I very hope you can come
 'I really hope that you can come.'

b. **duì nǐ néng lái wǒ hěn xīwàng*
 about you can come I very hope
 'I really hope that you can come.'

(10) a. **wǒ hěn shīwàng nǐ bù néng lái*
 I very disappointed you not could come
 'I'm really disappointed that you couldn't come.'

b. *duì nǐ bù néng lái wǒ hěn shīwàng*
 about you couldn't come I very disappointed
 'I'm really disappointed that you couldn't come.'

In (9), what the speaker hopes will happen in the future, which is more like new information, so it must appear later and is coded as a direct object. On the contrary, in (10), what the speaker is disappointed with has happened already at the moment of speaking, which is of more givenness; hence it must appear earlier, being coded as an oblique.

The difference is not only relevant to whether a participant is coded as oblique or direct object; it also has to do with whether the verb is bi-valent or mono-valent respectively. The verb *xīwàng*'s object cannot be omitted while the verb *shīwàng*'s oblique can and thus they are taken as bi-valent verb and mono-valent verb respectively.

⁴ The contrast between (8a-b) and (8c) is similar to that between *to ride on the horse* and *to ride the horse* in English.

2.2.4 Coded and uncoded alternations

Indexing applicatives play a great role in realizing valency alternations. There are two derivational origins of applicatives in Mandarin:

1). Prepositions. For example, *dài* ‘bring’ does not have R-DOC (Recipient-related DOC) alternation, while *dài-gěi* ‘bring-to’ does (3.4.1).

2). Directional verbs/particles. Mandarin has a set of directional verbs/particles which indicate the movement direction of relevant participants in an event. For example, *zū* ‘rent’ is ambiguous or neutral about direction of transfer. When it makes a compound with a directional verb/particle *jìn* ‘enter/in’ or *chū* ‘exit/out’, the ambiguity disappears. *jiè-jìn* and *jiè-chū* mean ‘rent (from)’ and ‘rent out’ respectively.

The function of the above two applicatives is similar to that of prepositions/particles in English phrasal verbs. What makes them different is that the Mandarin preposition/particles are further incorporated into the verb, rendering a compound, which can take TAM (Tense-Aspect-Modality) suffixes, in a way very much similar to English *upload*, *download*, etc. For example, *zuò* ‘to sit’ is a bi-valent verb since it can take a position as its direct object (*wǒ zuò zhè-zhāng yǐzi, nǐ zuò nà-zhāng yǐzi* ‘lit. I sit this chair and you sit that chair’), while *zuò-xià* ‘lit. sit down’ is a mono-valent verb.

Some semantic changes caused by these applicatives are rather predictable and their corresponding valency alternations are rather transparent (4.11) while others are rather idiomatic, such as *kàn-shàng* ‘lit. look-up, meaning ‘take a fancy to somebody/something’, and *kàn-kāi* ‘lit. look-away, meaning ‘do not take something undesirable to heart’. This difference in semantic transparency resembles English phrasal verb. For example, the meaning of *to pick up* is straightforward while that of *to take up* is very idiomatic.

In addition, TAM (Tense-Aspect-Modality) markers can also change valency frames. For example, DUR (duration aspect marker) *-zhe* changes an action to a state, thus affecting the valency structure (3.2.2). In particular, *-de*, originally a modality suffix meaning ‘be able, can’, is widely used to index a predicative complement (4.13, 4.14).

In this chapter, the alternations that are caused and conditioned by applicatives are taken as verb-coded ones while those by TAM markers are not. However, *-de*, though derived from a modality marker, has lost its TAM meaning in the relevant alternations. Therefore, it can be viewed as an applicative, and the alternations triggered by it as coded alternations.

In the later parts of the chapter, our discussion will be focused on the more productive and predictable alternations triggered by applicatives.

2.2.5 Valency-based verb classes

The following verb list is ordered primarily according to their valency numbers. The valency number of a verb is determined by the maximum number of ‘bare arguments’ in all its alternations. By ‘bare arguments’ we mean those without any role marking (preposition or applicative verbal suffixes), i.e. ‘arguments uncoded in both indexing and flagging’. For example, *xiào* ‘laugh’ can be used as either transitive (meaning ‘laugh at’) or intransitive, and we take it as bi-valent according to its transitive use, where the object, unlike in English *laugh*, is not coded as a prepositional phrase.

We choose 16 alternations for discussion in the chapter, which are typologically significant. Among the 16 ones, nine are included in the following Verb List. They are neither too productive nor too rarely used. The following are the designated numbers for each alternation, followed by its abbreviation and the relevant section of discussion:

- 1: Quantity Ratio Alternation, QR (4.2).
- 2: Ambitransitive Alternation, AMB (4.3).
- 3: BA Alternation, BA (4.6).
- 4: BEI Alternation, BEI (4.8).
- 5: Oblique Object Alternation, OBO (4.10).
- 6: Middle Alternation, MID (4.11).
- 7: Source-related Double Object Alternation, S-DOC (4.12).
- 8: Recipient-related Double Object Alternation, R-DOC (4.12).
- 9: Transitive DE Alternation, TDE (4.14).

VERB LIST

Gloss	Verb	Role Frame	Alternation								
			1	2	3	4	5	6	7	8	9
rain	NONE										
be a hunter	shì lièrén	S V X									
Adjectival verbs (3.1, 4.13, 4.14)											
be dry	gān	S Adj									
be hungry	è	S Adj									
be sad	bēishāng	S Adj									
Mono-valent verbs with a predicate argument (3.3.4)											
feel cold	(gǎndào) lěng	S V X									
feel pain	(gǎndào) téng	S V X									
Mono-valent verbs of action (3.2.1)											
cough	késòu	S V									9
Mono-valent verbs of state (3.2.2)											
die	sǐ	(X) V S									
sit down	zuòxià	(X) V S									
Bi-valent verbs of action (3.3.2)											
beat	pāi	S V O			3	4		6			9
bring	dài	S V O			3	4		6			
build	jiàn	S V O			3	4		6			9
carry	dài ⁵	S V O			3	4		6			
climb	pá	S V O			3	4	5	6			9
cover	gài	S V O	1		3	4		6			9
cut	qiē	S V O			3	4		6			9
dress	chuān	S V O	1		3	4	5	6			9
fear	pà	S V O									

⁵ Both 'bring' and 'carry' can be translated into *dài*. However, in text, *dài* for 'bring' frequently take an applicative indicating the movement direction according to situations.

frighten	xiàhu	S V O			3	4					9
go	qù	S V O	1								
hide	cáng ⁶	S V O	1		3	4		6			9
hit	dǎ	S V O			3	4	5	6			9
hug	bào	S V O			3	4		6			9
jump	tiào	S V O			3	4		6			9
know	rènshí	S V O									
laugh	xiào	S V O			3	4		6			9
leave	líkāi	S V O									
live	zhù	S V O	1		3	4		6			9
load	zhuāng	S V O	1		3	4		6			9
look at	kàn	A V P			3	4	5	6			9
meet	pèngjiàn	S V O									
peel	xiāo	S V O			3	4		6			9
play	wán				3	4	5	6			9
put	fàng	S V O	1		3	4	5	6			9
run	pǎo	S V O					5	6			9
say	shuō				3	4	5	6			9
scream	jiānjiào	S V O									
search for	sōu				3	4		6			9
see	kànjiàn	S V O									
shave	guā				3	4	5	6			9
shout at	hèchì	S V O			3	4		6			9
show	zhǎnshì	S V O			3	4		6			9
sing	chàng	S V O	?		3	4	5	6			9
sit	zuò	S V O	1		3	4	5	6			9
smell	wén	S V O			3	4		6			9
talk	tán	S V O			3	4	5	6			9
think	xiǎng	S V O			3	4		6			9
throw	rēng	S V O			3	4	5	6			9
tie	shuān	S V O	?		3	4		6			9
touch	mō	S V O			3	4	5	6			9
wash	xǐ	S V O	1		3	4	5	6			9
Bi-valent verbs of state (3.3.3)											
blink	zhǎ	S V O		3	3	4		6			9
burn	shāo	S V O	1	3	3	4		6			9
roll	gǔn	S V O		3	3	4		6			9
sink	chén	S V O		3	3	4		6			
fill	zhuāngmǎn	S V O		3	3	4					
break ⁷	dǎduàn	S V O		3	3	4					

⁶ Bi-valent verbs of action *cáng* 'hide', *zhù* 'live', *zhuāng* 'load', *fàng* 'put', *zuò* 'sit' can be taken as pseudo-monovalent verbs with a post-verbal S (3.2.2) when they take a durative marker *-zhe*.

Recipient-related tri-valent verbs (3.4.1)												
give	gěi	S V R O							7			
pour	dào	S V R O			3	4		6	7			
send	sòng	S V R O						6	7			9
tell	gàosù	S V R O							7			
Source-related tri-valent verbs (3.4.2)												
ask for	yào	S V Sr O						5	6		8	9
eat	chī	S V Sr O	1					5	6		8	9
kill	shā	S V Sr O						5	6		8	9
take	ná	S V Sr O			3	4	5	6			8	9
tear	sī	S V Sr O			3	4		6			8	9
Complement-related tri-valent verbs (3.4.3)												
help	bāng	A V P C						6				9
like	xǐhuān	A V O C				4						
name	mìngmíng	S V O PREP X			3							

3 Valency classes

3.1 <S V>: Adjectival verbs

Mandarin adjectives can directly function as predication without copular verbs; they are thus taken as a subcategory of verbs.

There are two types of adjectives in Mandarin: the property adjectives and the descriptive adjectives. The latter is also known as the ‘vivid form of adjectives’, being morphologically complex, such as *hónghóng* ‘lit. lovely red ‘red-red’, *huǒhóng* ‘fire-red’, *hóngtóngtóng* ‘thoroughly red’. The property adjective is the basic form and shares some alternations with intransitive verbs, as shown in (68) of Section 4.1.3. The descriptive adjective behaves like APs, which cannot be modified by degree adverbs.

Though most of adjectival verbs are mono-valent in nature, as they share valency frame <S V> with most mono-valent verbs, some can be taken as bi-valent verbs or even tri-valent ones. For example:

- (11) *tā gāo wǒ sān yīngcùn*
 he high I three inch
 ‘He is three inches higher than me.’

Wǒ is surely a valency. If *sān yīngcùn* is taken as a valency, then the adjective *gāo* can be taken as a tri-valent adjectival verb⁸.

3.2 Mono-valent verbs

According to unmarked position of S, mono-valent verbs in Mandarin can be divided into two categories: those with a pre-verbal S and those with a post-verbal S. The former emphasizes

⁷ Strictly speaking, Mandarin does not have simple verbs for the general meanings of *break* or *fill*. They are expressed by various V-R(result) compound verbs. For *break*, there are *dǎ-pò* ‘lit. hit-broken’, *dǎ-sù* ‘lit. hit-smashed’, *dǎ-duàn* ‘lit. hit-severed’ and *diē-duàn* ‘lit. stumble-severed’. In general, verbs of accomplishment and achievement are coded as V-R compounds in Mandarin.

⁸ Only ‘measurable adjectives’ in Mandarin like *gāo* ‘high/tall’, *cháng* ‘long’, *kuān* ‘wide’, *zhòng* ‘heavy/weigh’ can be used in the construction of (11).

an action while the latter a state, including state change, of S.⁹ The post-verbal S of mono-valent verbs are somewhat Patient-like in the sense that the verb is of low agentivity and/or the S changes its state/location during the event, being affected by the event.

3.2.1 <S V> : Mono-valent verbs of action

The use of this kind of verbs is very simple without any uncoded alternations of valency frame:

- (12) a. *yīgè háizi késòu-le*
 one-CL child cough-PFV
 'A child coughed.'
- b. **késou-le yīgè háizi*
 cough-PFV one-CL child

3.2.2 <(X) V S> : Mono-valent verbs of state

There are three types of mono-valent verbs with a post-verbal S. One is verbs of low agentivity, like *sǐ* 'to die', *bìng* 'to be ill'. The second is metaverbs, also being of low agentivity. The third is verbs of (dis-)appearing/existing like *lái* 'to come', *zhù* 'to live', *zuò* 'to sit' with a TAM marker. Verbs of this type also behave as bi-valent verbs of action. When they have a post-verbal S, we may treat them as pseudo-monovalent verbs of state.

The pre-verbal position can be filled by a topic-like nominal X, as in (13a). The unmarked position of S is post-verbal¹⁰, based on the following two criteria.

First, in relative clauses, S must be post-verbal, as in (13b):

- (13) a. (*cūnzi lǐ*) *sǐ-le yīgè rén*
 village-LOC die-PFV one-CL person
 'A person died (in the village).'
- b. *sǐ-le rén de cūnzi*
 die-PFV person DE village
 'the village where some persons died'

Second, the pre-verbal S must be definite while a post-verbal S is not constrained by definiteness. Though a definite S usually moves to pre-verbal position as shown in (14a), it can remain post-verbally, as shown in (14b).

- (14) a. Post-verbal Subject Raising Alternation, PSR 4.1
Zhāngsān de fùqīn sǐ-le
 Zhangsan DE father die-PFV
 'Zhangsan's father died.'
- b. *Zhāngsān wǔ-suì nànián sǐ-le fùqīn*
 Zhangsan five-years that year die-PFV father
 'Zhangsan's father died when he was five years old. /
 Zhangsan lost his father (to death) when he was five years old.'

⁹ In the literature, especially in the generative literature, they are termed as unergative and unaccusative respectively (Huang 2006, 2007).

¹⁰ In the generative literature of Chinese linguistics, it is widely agreed that the argument of unaccusative verb is post-verbal in Deep Structure (Zhou 1990).

Some scholars (Huang 2007) treat *Zhāngsān* in (14b) as kind of Experiencer or ‘Effectee’. Thus, (14b) can be paraphrased as *Zhangsan’s father died on him when he was five years old*.

However, we treat *Zhāngsān* in (14b) as a topic, so *sǐ* ‘die’ can still be taken as a mono-valent verb.

Mandarin does not have avalent verbs in a strict sense. Instead, avalent verbs in other languages, like metoverbs, are usually coded as mono-valent verbs of state. These verbs are both of low agentivity and of state-change¹¹.

- (15) a. *xià yǔ le*
fall rain CRS
‘It’s raining.’

- b. Post-verbal Subject Raising Alternation (4.1)
yǔ xià le
rain fall CRS
‘The rain’s fallen.’

When S stays after V, a topic-like oblique normally appears sentence-initially. And frequently, an empty subject-like constituent, like NP *tiān* ‘sky’, appears in the subject position.

- (16) *jīntiān/wàimiàn/tiān xià yǔ le*
today/outside/sky fall rain CRS
‘It is raining today /outside /from the sky.’

Whether a verb can be coded as one with a post-verbal S has to do with pragmatics as well. For example, (15a) does not have its antonymous counterpart *tíng yǔ le* (lit. *stop rain CRS* ‘It stops raining.’) since the rain that has stopped is very unlikely to be new information. Hence *tíng* ‘stop’ cannot take a post-verbal S in a meteorological context.

Verbs of (dis-)appearing like *lái* ‘to come’ with PFV marker *-le* can take a post-verbal S, since the PFV marker makes a verb of (dis-)appearing sound more emphasizing the resulting state:

- (17) a. *lái* as a bi-valent verb of action
yī-ge lǎo rén lái-le wǒmen cūnzi
one-CL old person come-PFV we village
‘An old man came to our village.’
b. *lái* as a pseudo-monovalent verb of state
(wǒmen cūnzi lǐ) lái-le yī-ge lǎo rén
we village-LOC come-PFV one-CL old person
‘There came an old man in our village.’

The number of verbs of disappearing that can take a post-verbal S is overwhelmingly dominant over that of the verbs of disappearing with a post-verbal. This can be explained that something disappeared/lost is more ‘affected’ than that appeared/acquired, and thus behaving more like Patient (Shen 1999:198-217).

Verbs of existing like *zhù* ‘to live’, *zuò* ‘to sit’ with Durative marker *-zhe* can also take a post-verbal S, since a DUR marker makes a verb of existing sound more emphasizing the state of continuation:

- (18) a. *zhù* as a bi-valent verb of action
yī-ge lǎo rén zhù-zài zhè-ge fángjiān

¹¹ Though the English translation of ‘rain’ in (15a) is coded as a verb, it shares the same information status with its noun counterpart in Mandarin, in the sense that both appear later in linear order as new information.

one-CL old person live-APPL this-CL room

‘An old man lives in this room.’

- b. *lái* as a pseudo-monovalent verb of state

zhè-ge fángjiān zhù-zhe yī-ge lǎo rén

this-CL room live-DUR one-CL old person

‘There lives an old man in this room.’

3.3 Bi-valent verbs

3.3.1 Agentivity Hierarchy and the alignment of subject and object

Based on Dowty’s (1991) continuum of pro-agent vs. pro-patient, Chen (2004) proposes the following hierarchy of agentivity in Mandarin¹²:

- (19) agent > experiencer > instrument > time/location > goal/source > theme > patient

In SVO constructions, S always takes a participant that is higher in the agentivity hierarchy than what O takes. For example:

- (20) *wǒ tīng ěrjī* (agent > instrument)

I listen earphone

‘I use an earphone to listen.’

- (21) *wǒ hē xiǎobēi* (agent > instrument)

I drink little cup

‘I drink with a little cup.’

- (22) *mòzi mò màizi* (instrument > theme)

mill grind wheat

‘The mill is for grinding wheat.’

- (23) *luóbo qiē sī* (theme > patient)

radish cut strip

‘The radish should be cut into strips.’

- (24) *mǐ zhǔ-le zhōu* (theme > patient)

rice cook-PFV gruel

‘The rice has been cooked into gruel.’

In rare instances, the two roles on the two sides of the verb can switch their positions without changing the verb form or involving quantification (4.2). For instance:

- (25) a. *rénshēn pào-le jiǔ*

ginseng steep-PFV alcohol

‘The ginseng was steeped in alcohol.’

- b. *jiǔ pào-le rénshēn*

alcohol steep-PFV ginseng

‘Ginseng was steeped in alcohol.’

Here, the two roles, which can be taken as Instrument and Location respectively, both can alternately be interpreted as Instrument/Source, joined into a single product *rénshēnjiǔ* (lit. ginseng alcohol).

¹² In Chen’s terminology, ‘time/location’ and ‘goal/source’ are dubbed as ‘circumstantial’ and ‘inner location’ respectively.

The restriction of agentivity hierarchy applies to SVO order. The V here, though likely but not necessarily, is a bi-valent verb.

It can be noted that O can code more types of participants in Mandarin than in most other languages.

3.3.2 <A V (P)>: Bi-valent verbs of action

Parallel to mono-valent verbs, most bi-valent verbs can be divided into two categories: that of action and that of state. The former emphasizes process of action and are agent-centered while the latter resulting state (of the object) and patient-centered.¹³

In (26), *dǎshèng* ‘vanquish, conquer’ is a verb of action. Since it is agent-centered, its object can be omitted, as in (26b). Furthermore, the object cannot be raised to the subject position, as in (26c), though it can be topicalized as in (26d).

- (26) a. *bùdùì dǎshèng-le dírén*
army vanquish-PFV enemy
‘The army vanquished the enemy.’
- b. Object omitted:
bùdùì dǎshèng-le
army vanquish-PFV
‘The army won.’
- c. Subject omitted and Object raised:
**dírén dǎshèng-le*
enemy vanquish-PFV
‘The enemy was vanquished.’
- d. Object topicalized:
dírén bùdùì dǎshèng-le
enemy army vanquish-PFV
‘As to the enemy, the army vanquished them.’

3.3.3 <(A) V P>: Bi-valent verbs of state

A bi-valent verb of state expresses a patient-centered event, emphasizing a resultative state of patient. In other words, it denotes that an agent/causer causes something to happen to the patient. It thus carries some causative features and its alternations differ greatly from those of bi-valent verbs of action. Take *dǎbài* ‘defeat’ as an example. Since it is patient-centered, the patient cannot be deleted, as in (27b); but its agent can be deleted when the patient is raised to the subject position, as in (27c). In addition, (27a) has an alternation which is typically causative as in (27d)¹⁴.

- (27) a. *bùdùì dǎbài-le dírén*

¹³ In the literature, the two categories are dubbed different terms. For example, (Burzio 1986) names them transitive and causative respectively. In some generative literature (Huang 2006, 2007), they are also dubbed as unergative and unaccusative respectively.

¹⁴ Etymologically, the internal constructions of *dǎshèng* and *dǎbài* are ‘fight-win’ and ‘fight-lose’ respectively. This explains why the former is agent-centered while the latter is patient-centered. Furthermore, the differences are shown up even in nominalization. Only the prominent argument can be the possessive of the nominalized verb. If *bùdùì* refers to winner and *dírén* to loser, then, the following contrast occurs: *bùdùì de dǎshèng* ‘the army’s vanquishing’, **dírén de dǎshèng* ‘the enemy’s vanquishing’ while **bùdùì de dǎbài* ‘the army’s defeat’, *dírén de dǎbài* ‘the enemy’s defeat’

- army defeat-PFV enemy
'The army defeated the enemy.'
- b. Object omitted:
* *bùdùì dǎbài-le*
army defeat-PFV
'The army won.' (the reading 'The army is defeated' is grammatical, though)
- c. Subject omitted and Object raised:
dírén dǎbài-le
enemy defeat-PFV
'The enemy has been defeated.'
- d. *bùdùì shǐ dí rén dǎbài-le*
army cause enemy defeat-PFV
'The army brought about the defeat of the enemy/lit. We made the enemy lose.'

Bi-valent verbs of state include *zhǎ* 'blink', *shāo* 'burn', *gǔn* 'roll', *chén* 'sink', etc, most of which can also be treated as either transitive or intransitive. Take *chén* 'sink' for example.

- (28) a. *wǒ chén-le chuán*
I sink-PFV boat
'I sank the boat.'
- b. * *wǒ chén-le*
I sink-PFV
'I sank.'
- c. Ambitransitive Alternation (4.3)
chuán chén-le
boat sink-PFV
'The boat sank.'
- d. *wǒ shǐ chuán chén-le*
I make boat sink-PFV
'I sank the boat.'

3.3.4 <S V C> : Verbs usually with a predicative complement

Some bi-valent verbs take a predicate complement like English *feel* in *He felt cold*. The verb is optional if the complement is an AP, as in (29)¹⁵; but it is obligatory if the complement is a clause or an NP, as in (30).

- (29) *tā juéde lěng*
he feel cold
'He feels cold.'
- (30) *tā juéde dìqiú zài bàozhà*
he feel earth in explode
'He feels that the Earth is exploding.'

Unlike English *feel*, Mandarin *juéde* cannot take an NP object, as shown in (31)¹⁶.

- (31) * *tā juéde zìrán de wēilì*

¹⁵ There is a subtle difference in meaning with and without the verb *gǎndào* 'feel'. When the verb is absent, the sentence is ambiguous with the second reading 'his body is cold.'

¹⁶ However, Mandarin *gǎndào* behaves like English *feel* in this aspect, fitting all the three constructions.

he feel nature DE power

'He feels nature's power.'

Verbs of sense like *juéde* 'feel' only have Oblique Subject Alternation, where the body parts serve as the subject of Experiencer (4.9). For example, *tā* 'he/she' in (29) can be replaced by *tā de jiǎo* 'his/her feet', *tā shēn-shàng* 'on his/her body', etc.

Of course, there are bi-valent verbs that denote some relation, rather than action or state. (32) is an example. Verbs of relation belong to none of the three subcategories discussed above, and do not have any alternation. We do not discuss verbs of relation furthermore in this chapter.

(32) *zhè-běn shū shǔyú túshūguǎn*

this-CL book belong library

'This book belongs to the library.'

3.4 Tri-valent verbs

There are three major types of tri-valent verbs, related to Source, Recipient and Predicate Complement respectively. Relatively less used tri-valent verbs, such as *mìngmíng* 'to name' in (7), 2.2.2, are not included here.

3.4.1 <A V T PREP R>: Recipient-related tri-valent verbs

The R(ecipient) of the verb is introduced by the preposition *gěi* 'to', which derives from the co-verb meaning 'giving'. The verbs of this type have R-DOC (R-related Double Object Construction) alternation. The verb in R-DOC can be optionally coded with applicative *gěi* 'to' if it inherently implies the transfer of T, as in (33), where the verb *sòng* precisely means 'to give for free'. T(heme) can be preposed with the preposition *bǎ*, as in (33c).

- (33) a. *wǒ sòng-le yī-běn shū gěi tā*
I give-PFV one-CL book to him
'I gave a book to him.' (not implying the transfer is complete)
- b. R-DOC Alternation (4.12)
wǒ sòng (gěi)-le tā yī-běn shū
I song-to-PFV him one-CL book
'I gave him a book.' (implying that the transfer is complete)
- c. BA Alternation, BA (4.6)
wǒ bǎ yī-běn shū sònggěi-le tā
I BA one-CL book send-to-PFV he
'I gave a (specific) book to him.'

Only a very small closed set of verbs like *sòng* 'send', *jì* 'mail', *jiāo* 'teach' take optionally uncoded D-OCR and can be taken as true tri-valent verbs.

3.4.2 <A PREP Sr V T> Source-related tri-valent verbs

The Sr (Source) of the verb is introduced by the preposition *cóng* 'from', as in (34a). If Sr is not a place term, it must be followed by *nàr* or *nàlǐ* 'there', which indicates their semantic nature of Source. The construction has the S-DOC (Source-related Double Object Construction) <A V Sr

T> as its distinctive alternation¹⁷. (34a) also has R-DOC alternation, which, however, must be a coded one, necessarily taking an applicative *gěi*, as in (34c). S-DOC is used much more widely in Mandarin than in English (Zhang 2009).

- (34) a. *Lǐsì cóng Zhāngsān nàr mǎi-le yī-běn shū*
 Lisi from Zhangsan there buy-PFV one-CL book
 'Lisi bought a book from Zhangsan.'
- b. Uncoded S-DOC Alternation (4.12)
Lǐsì mǎi-le Zhāngsān yī-běn shū
 Lisi buy-PFV Zhangsan one-CL book
 'Lisi bought a book from Zhangsan.'
- c. Coded R-DOC Alternation (4.12)
Lǐsì mǎi(gěi)-le Zhāngsān yī-běn shū*
 Lisi buy-to-PFV Zhangsan one-CL book
 'Lisi bought Zhangsan a book.'

The contrast between (34b) and (34c) also suggests that S-DOC is less marked than R-DOC in Mandarin. This phenomenon can be attributed to the iconicity of temporal sequence, which fits S-DOC, but not R-DOC.

S-DOC is very productive in Mandarin. Many verbs that are otherwise regarded as bi-valent can be viewed as tri-valent ones since they can take source argument to form an S-DOC, on the condition that the semantic frames related to event structure knowledge are in accordance with the constructional meaning of DOC (Zhang 2009). For example:

- (35) *tā ná-le wǒ yī-běn shū*
 he take-PFV I one-CL book
 'He took a book away from me.'
- (36) *tā chī-le wǒ liǎng-gè píngguǒ*
 he eat-PFV I two-CL apple
 'He ate two apples of mine.'

3.4.3 <S V P C>: Complement-related tri-valent verbs

Causative verbs with the role frame <A V P C> are the typical ones among these verbs.

- (37) *wǒ shǐ tāmen gāoxìng le*
 I make they happy CRS
 'I made them happy.'

Prototypical causative verbs, such as *shǐ* 'make/cause' and *ràng* 'allow/permit', belong to a close set of verbs.

Non-causative verbs, like *bāng* 'help' and *jiǎnglì* 'award', can also be included in this type of tri-valent verbs:

- (38) *wǒ bāng tā xué shùxué*
 I help he learn math
 'I help him study math.'
- (39) *lǎobǎn jiǎnglì tā qù guówài lǚyou*

¹⁷ DOC should be taken as an alternation because its Sr/R must be definite/animate, while both Sr/R and T in the basic coding are not necessarily so. In short, we define the basic coding form as the one that is least-conditioned pragmatically (3.2.2), since alternations are mostly triggered by pragmatics.

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boss award he go abroad travel

‘The boss awards him a trip abroad.’

Psych verbs such as *xǐhuān* ‘like’, *ài* ‘love’, *hèn* ‘hate’, *tǎoyàn* ‘disgust’ and *chēngzàn* ‘praise’ can also take a predicate. They can thus be taken as tri-valent verbs as well. However, their role frame should be described as <E V M C> (E, M for Experiencer and Stimulus respectively) :

(40) *wǒ xǐhuān tā lǎoshí/xiào*

I like he honest/laugh

‘I like him for his honesty/ laughter.’

4 Alternations

It is not always immediately clear whether an alternation of valency frame is verb-coded or not, especially when an alternation involves a TAM suffix. In this chapter, we do not take TAM suffixes as valence-change applicatives since the valency change is a by-product of their basic TAM functions.

Most of the alternations listed below are uncoded, though there are exceptions, which involve the use of applicatives *-de*, *-qílái* and *-gěi* (4.11- 4.14).

Some of these alternations are very productive. For example, IDE (Intransitive DE alternation, 4.13) is applicable to almost all verbs, including adjectival verbs. Such kinds of alternations are not included in the alternations of Verb List.

There is an Object Omission Alternation in English (Levin 1998), which requires that the omitted object of a sentence be unspecified. However, this restriction is not necessary in Mandarin, where any object can be omitted as long as it can be inferred according to the context. For this reason, this kind of alternation is not discussed in the chapter.

Typologically less common alternations are marked with ‘#’.

4.1 Post-verbal Subject Raising Alternation (PSR)

This alternation is applicable to all mono-valent verbs with a post-verbal S (3.2.2). Here is an example :

(41) a. (?zài) *sēnlín-lǐ zhù-zhe yī-ge lǎo nǚrén*
in woods-LOC live-DUR one-CL old woman
‘In the woods lives an old woman.’

b. PSR

yī-ge lǎo nǚrén zhù- zài sēnlín-lǐ
one-CL old woman live-APPL woods-LOC
‘An old woman lives in the woods.’

Two points call for attention.

1. In PSR of (41b), *zài* ‘in’ is incorporated into the verb *zhù* ‘live’, functioning as a locative applicative, which triggers the necessary use of a locative object.

2. However, in the basic construction (41a), the presence of the sentence-initial preposition makes the structure marginal. This may be due to the fact that the sentence-initial locative expression is in nature a topic-like subject, and thus its locative function, and its function-coding as well, is reduced.

3. Although we take the frame <(X) V S> as the basic construction and <S V X> as its alternation, for many other verbs, the relation of the two frames is reverse. For example, DUR marker changes an action verb into a state one, making a post-verbal S preferable (3.2.2):

- (42) a. *wǒ wǎng qiáng-shàng guà-le yī-fúhuà*
I onto wall-LOC hang-PFV one-CL painting
'I hung a painting on the wall.'
- b. *qiáng-shàng guà-zhe yī-fúhuà*
wall-LOC hang-DUR one-CL painting
'On the wall hangs a painting.'
- c. *yī-fúhuà guà-zài qiáng-shàng*
one-CL painting hang-on wall-LOC
'A painting hangs on the wall.'

(42b-c) do not imply an unspoken Agent. However, when 'a painting' is taken as the subject, DUR marker should be replaced by the applicative *-zài* indicating a locative object, as in (42c).

The following (43) is another example related to DUR marker.

- (43) *jiàoshì-lǐ zuò-zhe jǐ-ge xuéshēng*
classroom-LOC sit-DUR some-CL student
'There are some students sitting in the classroom.'

In (44) below, *-chū* is an applicative derived from a directional particle, which makes the referent of S change its position. Correspondingly, this kind of S favors the post-verbal position.

- (44) *jiàoshì-lǐ pǎo-chū jǐ-ge xuéshēng*
classroom-LOC run-APPL some-CL student
'There are some students running out of the classroom.'

4.2 # Quantity Ratio Alternation (QR)

This alternation focuses on the ratio relationship in accommodation. The action meaning and the function of semantic role is reduced to a great extent. It is therefore applicable to many verbs with an accommodation meaning¹⁸.

- (45) a. *sān-ge rén chī yī-guō fàn*
three-CL person eat one-CL rice
'(Every) three people eat one pot of rice.'
- b. QR
yī-guō fàn chī sān-ge rén
one-CL rice eat three-CL person
'Each pot of rice is (enough) for three people to eat.' or
'Each pot of rice provides for three people to eat.'

4.3 Ambitransitive Alternation (AMB)

- (46) a. *wǒ dǎ-suì-le bēizi*
I hit-break-PFV cup
'I broke the cup.'

¹⁸ English has similar alternation, such as *two beds sleep four kids*, *two auditoriums sit one thousand people*. However, it seems the alternation in English is always related to accommodation of location/container, so its application is much more restricted than that in Madarin.

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b. AMB

bēizi dǎ-suì-le

cup hit-break-PFV

‘The cup broke.’

In Mandarin, this alternation can be viewed as the result of the object topicalization combining with the subject deletion, a process that is quite common in the language. For example, (46b) can be viewed as the result of subject deletion in the following sentence:

(47) *bēizi wǒ dǎ-suì-le*

cup I hit-break-PFV

‘The cup, I broke it.’

Therefore, the number of verbs that fit this alternation can be very large in Mandarin.

4.4 Reciprocal Subject Alternation (RS)

(48) a. *wǒ yù-jìàn-le tā*

I meet-see-PFV he

‘I met him.’

b. RC

wǒ hé tā yù-jìàn-le

I and he meet-see-PFV

‘He and I met.’

c. RC

wǒ hé tā xiāng-yù-le

I and he mutual-meet-PFV

‘He and I met.’

This alternation sounds a little awkward without an appropriate context. The more natural construction is (48c), where the use of an incorporated reciprocal adverb is necessary. (48c) can be seen as a coded alternation, which is applicable to many verbs:

(49) a. *wǒ ài tā*

I love he

‘I love him.’

b. RC

wǒ hé tā xiāng-ài

I and he mutual-love

‘He and I love each other.’

4.5 # Split Verb Alternation (SPL)

(50) a. *tā shuìjiào-le*

he sleep-PFV

‘He slept.’

b. SPL

tā shuì-le yīgè hǎo jiào

he sleep-PFV one-CL good sleep

‘He slept a sound sleep.’

Here, *jiào* is a bound morpheme that does not have the meaning of ‘sleep’ if it does not collocate with *shuì* to form a compound verb. On the other hand, without *jiào*, *shuì*’s meaning is a more general one, similar to ‘to lie (down)’.

The alternation originates from V-O compounds like *dú-shū* ‘read, study’ (lit. ‘read-book’, where *book* is non-referential). Syntactically, *dú-shū* is similar to English *lip-read*, both containing an incorporated non-referential object. However, *dú-shū* cannot take an NP object but *lip-read* can.

Such compound verbs can be grouped into two types, depending on which morpheme carries semantic information. The first type is similar in nature to what we find in English cognate object VO construction, like in *to sleep a (sound) sleep* and *to die a (suffering) death*, where the nominal morpheme is semantically redundant. The second type resembles the English VO phrases *make a call* and *have a visit*, where the verbal morpheme is a semantically empty pro-form, like *shàngxué* ‘go to school’ (lit. go-study).

The alternation is now expanding to certain non-VO disyllabic verbs, especially in colloquial registers. Even some phonetic loan disyllabic words such as *yōumò* ‘humor(ous)’, can be used in this alternation. For example, one can say *yōu-le tā yī mò* (lit. *hu-ed him a mor* ‘made a joke with him’). The bound object in the alternation is called an ‘ionized object’ (Chao 1968: 430-434). Common verbs that allow this alternation include *yóuyǒng* ‘swim’, *jūgōng* ‘bow’, and most of V-O compound verbs like *jiànmiàn* (lit. see-face) ‘meet’, *chīfàn* (lit. eat-rice) ‘take a meal’ or just ‘to meal’.

4.6 # BA Alternation (BA)

- (51) a. *wǒ kàn-le zhè-běn shū sān-biàn*
 I read-PFV this-CL book three-CL
 ‘I have read books three times.’

- b. BA
wǒ bǎ (zhè-běn) shū kàn-le sān-biàn
 I BA (this-CL) book read-PFV three-CL
 ‘I have read this book three times.’

BA is an object-marking preposition, whose raised object must be definite/specific/generic. Thus, the definiteness indicator like demonstratives can often be omitted, as in (51b). The alternation raises the O of old information to the pre-verbal position, thus vacating the post-verbal position for focused new information. Therefore, the verb in the BA alternation must be followed by some elements, of which the limit form is a TAM marker.

The post-verbal new information can be a complicated predicate clause:

- (52) *wǒ bǎ tā pīpíng-de liǎn dōu hóng-le*
 I BA he criticize-DE face even red-PFV
 ‘I criticized him so much that his face even turned red.’

BA alternation is available to most transitive verbs as long as the raised object is definite/specific/generic and the referent of the raised object is highly affected. The latter condition can be shown in the following contrast between (53d-e) for *qiǎng* ‘rob’ and (54d-e) for *tōu* ‘steal’. In (53d-e), since the Source of *qiǎng* ‘rob’ is more affected by the action of robbing, it can stand alone without the Theme and be coded as a BA object. By contrast, the Source of *tōu* ‘steal’ cannot, as shown in (54d-e).

-
- (53) a. *Lǐsì cóng Zhāngsān nàr qiǎng-le 100 yuán qián*
 Lisi from Zhangsan there rob -PFV 100 dollar money
 ‘Lisi robbed Zhangsan of 100 dollars.’
- b. Source-related DOC:
Lǐsì qiǎng-le Zhāngsān 100 yuán qián
 Lisi rob -PFV Zhangsan 100 dollar money
 ‘Lisi robbed Zhangsan of 100 dollars.’
- c. Source deleted:
Lǐsì qiǎng-le 100 yuán qián
 Lisi rob -PFV 100 dollar money
 ‘Lisi robbed 100 dollar.’
- d. Theme deleted:
Lǐsì qiǎng-le Zhāngsān
 Lisi rob -PFV Zhangsan
 ‘Lisi robbed Zhangsan.’
- e. Source-raised BA alternation
Lǐsì bǎ Zhāngsān qiǎng-le
 Lisi BA Zhangsan rob -PFV
 ‘Lisi robbed Zhangsan.’
- (54) a. *Lǐsì cóng Zhāngsān nàlǐ tōu-le 100 yuán qián*
 Lisi from Zhangsan there steal -PFV 100 dollar money
 ‘Lisi stole 100 dollars from Zhangsan.’
- b. Source-related DOC
Lǐsì tōu-le Zhāngsān 100 yuán qián
 Lisi steal -PFV Zhangsan 100 dollar money
 ‘Lisi stole 100 dollars from Zhangsan.’
- c. Source deleted
Lǐsì tōu-le 100 yuán qián
 Lisi steal -PFV 100 dollar money
 ‘Lisi stole 100 dollars.’
- d. Theme deleted
 * *Lǐsì tōu-le Zhāngsān*
 Lisi steal -PFV Zhangsan
 ‘Lisi stole Zhangsan.’
- e. Source-raised BA alternation
 * *Lǐsì bǎ Zhāngsān tōu-le*
 Lisi BA Zhangsan steal -PFV
 ‘*Lisi stole Zhangsan.’

4.7 # Double Accusative Alternation (DAC)

As has been shown in (14), Section 3.2.2, a mono-valent verb of state can take a topic of ‘Experiencer/Effectee’ derived from the O’s possessor. (55a-b) is a further example:

- (55) a. Post-verbal Subject-Raising (4.1)
tāde yǎnjīng xiā-le

his eye blind-PFV

‘He is blind.’

- b. Post-verbal S’s Possessor topicalized

tā xiā-le yǎnjīng

he blind-PFV eye

‘He is now blind.’

Parallel to (55), a bi-valent verb can turn the possessor-derived Effectee into a BA object as in (56b) or the subject of BEI construction, in (56d).

- (56) a. *dírén dǎ-xiā-le tāde yǎnjīng*

enemy strike-blind-PFV his eye

‘The enemy struck him blind.’

- b. DAC Alternation

dírén bǎ tā dǎ-xiā-le yǎnjīng

enemy BA he strike-blind-PFV eye

‘The enemy struck him blind.’

- c. BEI Passive Alternation (4.8)

tā bèi díren dǎ-xiā-le yǎnjīng

he BEI enemy strike-blind-PFV eye

‘He was struck blind by the enemy.’

- d. BEI-BA Compound Alternation (4.16)

tā bèi díren bǎ yǎnjīng dǎ-xiā-le

he BEI enemy BA eye strike-blind-PFV

‘He was struck blind by the enemy.’

There is a whole-part relation between the two accusatives. The DAC construction is found in other Sinitic languages (Chappell 1999) and East Asian languages, such as Korean.

4.8 BEI Passive Alternation (BEI)

BEI is a preposition for demoted Agents, primarily equivalent to English *by*.

- (57) a. *wǒ sòng zhè-běn shū gěi tā*

I send this-CL book to he

‘I send this book to him.’

- b. *zhè-běn shū bèi wǒ sòng-gěi-le tā*

this-CL book by I send-to-PFV he

‘This book was sent to him by me.’

Though the alternation is widely applicable to transitive verbs, it occurs much less frequently than its English counterpart in real texts because the alternation generally carries a strong adverse flavor in Mandarin. In addition, the agent can be deleted, even leaving *bèi* stranded, as in (58b-c):

- (58) a. *zhè-běn shū bèi wǒ sòng-diào-le*

this-CL book by I send-away-PFV

‘This book is sent away by me.’

- b. Agent deleted

zhè-běn shū bèi [] sòng-diào-le

this-CL book by [] send-away-PFV

‘This book is sent away. (It is a pity.)’

- c. the whole *bei*-phrase deleted
zhè-běn shū [] sòng-diào-le
 this-CL book [] send-away-PFV
 ‘This book is sent away.’

The difference between (58b) and (58c) is that (58b) implies an adverse nuance: the speaker is sorry that the book is not available at the moment. Though the BEI passive construction does not necessarily carry a strong adverse flavor in present-day Mandarin usage (like *bèi shòuyǔ* ‘be bestowed or conferred (as an honor)’ (Zhang 2009), that adverse flavor is nonetheless strong as a conventional semantic component. Furthermore, the BEI passive construction is peculiar syntactically in that it can fulfill both valency-increasing and valency-decreasing functions once the constructional meaning is widely understood and the use of the construction has been flexibly and creatively extended. However, the overlapping part of both uses is that the subject (which may correspond to Patient of the underlying verb) is adversely affected. For example, in the contemporary popular uses of the BEI passive construction, the verb position can be held by a bi-valent VO phrase or a mono-valent phrase like *bèi dàibiǎo* (lit. be represented) ‘to be represented against one’s will’, and *bèi jùnyè* (lit. be employed) ‘to be statistically counted as being employed’. This kind of use is especially popular on the Internet, where it clearly contains a sarcastic implication.

4.9 Oblique Subject Alternation (OBS)

- (59) a. *wǒ yòng zhè-bǎ yàoshi kāi-le mén*
 I with this-CL key open-PFV door
 ‘I opened the door with this key.’
 b. *zhè-bǎ yàoshi kāi-le mén*
 this-CL key open-PFV door
 ‘This key opened the door.’

The subject of this type of alternation can have various semantic roles except Agent, Experiencer or Patient. These roles should be regarded as normal subjects when they occupy the subject position.

4.10 Oblique Object Alternation (OBO)

Some participants that are normally coded as obliques are often coded as objects in Mandarin. For instance:

- (60) a. *tā yòng dà-wǎn/zài shítáng chī fàn*
 he with big-bowl/in cafeteria eat meal
 ‘He takes his meal with a big bowl / in the cafeteria.’
 b. *tā chī dà-wǎn / shítáng*
 he eat big-bowl/cafeteria
 ‘He eats with a big bowl / in the cafeteria.’

Only frequently used verbs have this alternation. Generally, the likeliness of such oblique objects is proportionally correlated to the frequency of the verb (Williams 1991). One example is *pǎo* (lit. run/go around), such as in *pǎo guān* (lit. run official position) ‘go around to obtain official positions’, *pǎo guānxì* (lit. run connection) ‘go around for social connections (for some purposes)’, *pǎo shēngyì* (lit. run business) ‘go around for business’, *pǎo qīnqī* (lit. run relatives)

‘run around visiting relatives’, *pǎo mǎlǎsōng* (lit. run marathon) ‘run a marathon’, *pǎo guànjūn* (lit. run champion) ‘run for first place’ etc. Common examples include *xiě* ‘write’ and *kǎo* ‘examine, take examination’. The former can take various writing instruments or ways of writing as its objects, such as a pen, brush, pencil, ink, paper, calligraphic styles, etc. The latter can take as its object course content, credit, a degree, a job/position, or a school, college, university, etc.

4.11 Middle Alternation (MID)

- (61) a. *wǒ qiē zhè-kuài miànbāo*
I cut this-CL bread
‘I cut this bread.’
- b. MID
zhè-kuài miànbāo qiē-qílái hěn róngyì
this-CL bread cut-APPL very easy
‘This bread cuts very easily.’

Unlike its English counterpart, Mandarin MID is a coded alternation with an applicative marker *qílái*. The alternation is widely applicable to almost all transitive verbs, so it is not included in the Verb List.

The applicative *-qílái* was originally a directional verb meaning ‘get up’ and later developed into an inchoative marker before it became an MID applicative marker. When it is used in MID alternation, it does not carry inchoative meaning at all. We therefore treat it as an applicative and the alternation as uncoded.

4.12 Double Object Construction Alternation (S-DOC, R-DOC)

There are two types of DOC: Source-related DOC (S-DOC) and Recipient-related DOC (R-DOC). The former is more productive and less marked than the latter in Mandarin. This can be attributed to the fact that the former is consistent with the temporal sequence of event process (source before goal/recipient).

Only a very small closed set of verbs, like *sòng* ‘send’, *jì* ‘mail’ and *jiāo* ‘teach’ take optionally uncoded R-DOC; while a considerable number of bi-valent verbs have the coded DOC alternation with an applicative marker *gěi* ‘to’ (3.4.1).

- (62) a. *wǒ dài-le yī-fēng xìn gěi tā*
I dai-PFV one-CL letter to he
‘I brought a letter to him.’
- b. Coded R-DOC
*wǒ dài *(gěi)-le tā yī-fēng xìn*
I bring-APPL -PFV he one-CL letter
‘I brought him a letter.’
- c. Coded BA alternation
*wǒ bǎ yī-fēng xìn dài *(gěi)-le tā*
I BA one-CL letter bring-APPL -PFV he
‘I brought a letter to him.’

Source-related tri-valent verbs, including *xiāo* ‘peel’, *ná* ‘take’, *sī* ‘tear’, *rēng* ‘throw’, *mǎi* ‘buy’, *mài* ‘sell’, *xiě* ‘write’, *liú* ‘leave (something)’, also have DOC as their alternation. Unlike

R-DOC, S-DOC cannot be coded. Source-related tri-valent verbs may have R-DOC as well, but they must take the coded alternation, as illustrated in (63c).

- (63) a. *Lǐsì cóng Zhāngsān nàr ná-le yī-běn shū*
 Lisi from Zhangsan there take-PFV one-CL book
 'Lisi took a book from Zhangsan.'

- b. Source-related Double Object Construction Alternation, S-DOC (4.12)

Lǐsì ná-le Zhāngsān yī-běn shū
 Lisi take-PFV Zhangsan one-CL book
 'Lisi took a book from Zhangsan.'

- c. Coded Recipient-related Double Object Construction Alternation (4.12)

Lǐsì mǎi(gěi)-le Zhāngsān yī-běn shū*
 Lisi buy-to-PFV Zhangsan one-CL book
 'Lisi brought Zhangsan a book.'

4.13 Intransitive DE Alternation (IDE)

Section 3.4.3 has discussed bi-valent verbs with a Predicate Complement. Its role frame is < S V C >. This role frame can also serve as a coded alternation for other verbs. The coding marker therein is the applicative *-de*, which indexes a predicative complement (Chao 1968: 355-358), referring to the manner or resulting extent of the action V. The alternation is treated as the 'Complex Stative Construction' in Li & Thompson (1981: 611-630) ¹⁹.

The predicate complement is in nature a promoted and focused adverbial. The following examples in (64) demonstrate this point.

- (64) a. *tā hěn fěnnùdi jùjué-le*
 he very angrily refuse-PFV
 'He very angrily refused.'
- b. IDE
tā jùjué-de hěn fěnnù
 he refuse-DE very angry
 'He refused very angrily.'

Both the Mandarin and the English translation in (64a) can act as a reply to 'What happened to him?' but not to 'How did he reply?' The situation is reversed for (64b). The English translations of (64a) and (64b) also indicate that sentence-final adverbials are more likely to be focused and emphasized. The relevant difference between Mandarin and English is that Mandarin codes a focused adverbial as predicate complement, but English does not. ²⁰

¹⁹ Whether the promoted adverbial is secondary or primary predication has been a hotly discussed issue in Chinese linguistic circles (Huang 1988).

²⁰ Nevertheless, sentence-final adverbials in English also carry some subtle morphological feature, which indicates that they do contain some predicate feature:

- (i) a. He drives slow(ly).
 b. He slow*(ly) drives.
 c. He drives his car slow*(ly) into the garage.

the sentence (i-a) is more or less syntactically parallel to 'he grows slow'.

A contribution to the cross-linguistic project "Valency Classes in the World's Languages", see for details <http://www.eva.mpg.de/lingua/valency/index.php>

If observed from another angle, a V-*de* combination can be treated as a copular verb. The comparison of (65a) and (65b) indicates that the function of the applicative -*de* is to license a predicative complement²¹.

- (65) a. *tā biàn jiàoshòu le*
he change professor CSR
'He became a professor.'

- b. IDE
tā biàn-de hěn cōngmíng le
he change-DE very clever CSR
'He became smart.'

This alternation is actually applicable to all verbs, both transitive ones, as *jùjué* 'refuse' in (64), and intransitive ones, as *sǐ* 'die' in (66) below, and even adjectives, as in (67).

- (66) *tā sǐ-de niánqīng*
he grow-DE young
'He died young.'

- (67) *tā bēishāng-de kū le*
he sad-DE cry CSR
'He is so sad that he cries.'

The Complement may be a clause, as illustrated in (68):

- (68) *tā xiào-de dùzi téng-le*
he laugh-DE belly ach-PFV
'He laughed so much that his belly ached.'

The universal application of the alternation is quite understandable, given that it promotes a manner adverbial, which is universally available to almost all verbs. The IDE Alternation is, therefore, not included in the alternations of Verb List.

4.14 Transitive DE Alternation (TDE)

A transitive verb joined to the applicative marker -*de* can take a predicate complement while keeping its object (Lü 1980)²². The alternation is in nature a kind of causative construction, since V-*de* can be replaced by the typical causative verb *shǐ* 'make':

- (69) TDE
wǒ pīpíng-de tā liǎn hóng-le
I criticize-DE he face red-PFV
'I criticized him so much that he flushed / I made him flush with my critique.'
- (70) Normal causative construction
wǒ shǐ tā liǎn hóng-le
I make he face red-PFV
'I made him flush.'

²¹ In (65b), if *hěn* 'very' is absent, -*de* is not obligatory. In such a case, *biàn-cōngmíng* should be treated as a compound verb.

²² Neither Chao (1968) nor Li & Thompson (1981) mentioned this construction though they recognized Alternation IDE.

Further, the object can be raised and changed into a BA object, as in (71), or raised further into the subject position in BEI passive alternation (72). These two alternations prove that *tā* ‘he’ in (69) is not part of the complement clause, but an object of the verb *pīpíng* ‘criticize’.

(71) BA alternation

wǒ bǎ tā pīpíng-de liǎn dōu hóng-le
I BA he criticize-DE face even red-PFV
‘I criticized him so much that he even flushed.’

(72) BEI alternation

tā bèi wǒ pīpíng-de liǎn dōu hóng-le
he BEI I criticize-DE face even red-PFV
‘He was criticized by me so much that he even flushed.’

Some intransitive verbs have this alternation as well:

(73) tā xiào-de wǒ bùhǎoyìsī-le.
he laugh-DE I embarrassed-PFV
‘He laughed at me so much that I felt embarrassed.’

When the complement refers to resulting extent, Alternations IDE and TDE look like Resultative Construction in English (Levin 1993:99-101), such as *The river froze solid*, *She cried her eyes dry* respectively. However, the Mandarin counterpart is much more productive for the following two reasons:

- 1) The complement in IDE and TDE can refer to focused manner, in addition to resulting extent.
- 2) They are coded alternations. The applicative *-de* can trigger a complement even the meaning of the verb does not immediately fit the resultative construction.

4.15 Verb-Copying Alternation (VCP)

In (71) above, when the construction refers to customary events and the predicative complement is manner instead of resulting extent, other prepositions like *duì* ‘towards’ or a copied V must be used instead of BA, as in (74) and (75), since BA object must be at least specific (2.2.1) and hence the event involving BA object must be specific as well.

(74) wǒ duì xuéshēng pīpíng-de hěn xiōng
I towards student criticize-DE very harshly
‘I criticize students very harshly.’

(75) VCP

wǒ pīpíng xuéshēng pīpíng-de hěn xiōng
I criticize student criticize-DE very harshly
‘I criticize students very harshly.’

(76) V-O topicalized

(pīpíng) xuéshēng wǒ pīpíng-de hěn xiōng
(criticize) student I criticize-DE very harshly
‘As for students, I criticize them very harshly.’

(74) is not causative and the *V-de* form cannot be replaced by the causative verb *shǐ* ‘make’. Constructions like (74) are dubbed as Verb Copying Construction (Li & Thompson 1981:442-450).

The copied verb and its object are characteristic of topic, as indicated by (76), where the copied verb and its object can take the sentence-initial topic position. Liu (2004) names this kind of topic as 'Identical Topics'. When it stays in its unmarked position as in (75), it is taken as a sub-topic.

The application of VCP alternation, of course, fits many constructions, as long as the post-verbal position is occupied by other focused or new information.

- (77) a. *wǒ kàn-le sān-xiǎoshí shū*
 I read-PFV three-hour book
 'I have read for three hours.'
- b. VCP
wǒ (kàn)-shū kàn-le sān-xiǎoshí
 I read-book read-PFV three-hour
 'I have read for three hours.'
- c. V-O topicalized
(kàn)-shū wǒ kàn-le sān-xiǎoshí
 read-book I read-PFV three-hour
 'I have read for three hours.'

4.16 #Compound Alternations

As have been shown in (71-72) of 4.14, the BA and BEI alternation and the TDE alternation can combine into compound alternations. Below are some commonly used compound alternations.

- (78) BA alternation
wǒ bǎ tā mà-de liǎn dōu hóng-le
 I BA he scold -DE face even red-PFV
 'I scolded him so much that he even flushed.'

- (79) BEI alternation
tā bèi wǒ mà-de liǎn dōu hóng-le
 he BEI I scold -DE face even red-PFV
 'He was scolded by me so much that he even flushed.'

BEI-BA Compound Alternation is allowed as well:

- (80) *tā bèi dí rén bǎ yǎnjīng dǎ-xiā-le*
 he BEI enemy BA eye strike-blind-PFV
 'The enemy struck him blind.'
 (lit. He was struck blind by the enemy.)

Various compound alternations can be found in Mandarin.

5 Concluding remarks

In this chapter, we have rendered a general description of the main regularities in the valency properties of Mandarin verbs. The following conclusion can be reached:

We assign valency numbers to Mandarin verbs according to the maximum number of uncoded participants in their basic construction and various alternations. Uncoded participants are

those that are neither indexed by the verb nor flagged with role markers except bare time and location expressions. Mandarin Adjectives can be taken as a subcategory of verb.

Sixteen alternations in Mandarin have been discussed, six of which are Mandarin-specific or less documented in the world's languages. Most of the alternations in the chapter are uncoded, and the exceptional ones involve the use of such applicatives as *-de*, *-qílái* and *-gěi*. TAM markers do not count as applicatives though they can change role frames.

These alternations differ greatly in their applicability. While Intransitive DE alternation is applicable to almost all verbs, Post-verbal Subject Raising Alternation is only available to mono-valent verbs of state. Alternations such as Reciprocal Subject Alternation and Oblique Subject Alternation are also considerably limited in their applicability to verb classes. BA and BEI alternations fall in the middle position on applicability hierarchy.

Using suffixes plays a critical role in realizing alternations which involve both increasing and decreasing of valency. For example, the applicative suffix *-gěi* can change a bi-valent verb into Recipient-related tri-valent one. On the contrary, with the help of the TAM suffix *-zhe* and *-le*, bi-valent verbs can function as mono-verbs of state as well.

Valency increasing enables a relatively simple syntactic pattern to extend, which in turn makes possible a more complex syntactic pattern, resulting in new alternations. The making of the more complex syntactic pattern can be viewed as integration or compounding of various syntactic patterns. Those compound alternations are usually related to DE alternation, BA alternation and BEI alternation. Another example is Mandarin Middle Alternation, which, unlike its English counterpart, renders itself a coded alternation with the applicative marker *-qílái*, which helps make the alternation widely applicable to almost all transitive verbs.

Some alternations clearly relate to parataxis of Mandarin, a general way of language construction that does not depend much on rigid grammatical forms but more on lexical means or the logical relation implicated in clauses to realize grammatical relations, achieving coherence through knowledge in general within context. Such an important characteristic makes possible some syntactic patterns that permit the missing of certain arguments which are necessary in equivalent patterns in other languages. A typical example is Mandarin Ambitransitive Alternation, which is in fact different in nature from its English counterpart.

The VO pattern in Mandarin is most widely used and extremely influential and productive. One instance is Oblique Object Alternation, which covers a wide range from the temporary use of metonymy to idiomatic use. Another instance of the wide applicability of VO pattern is the Split Verb Alternation, which is another feature specific of Mandarin. Therefore, the O slot can accommodate many roles which are generally impossible in the same slot in other languages.

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